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Stakeholder management in marine protected areas of Catanduanes Island, Philippines

Jimmy T. Masagca*

Catanduanes State University, Virac 4800, Catanduanes, Philippines

Abstract

The management of Marine Protected Areas (MPA) or Community Managed Marine Spaces (CMMS) in Catanduanes island, Philippines has increasingly gained interest among marine conservationists. Looking into the benefits, there are several attempts to explain whether effectiveness of these spaces is achieved in the context of conservation, maximizing stakeholders participation, poverty alleviation and sustainable development. This paper looks into how contextualization in the governance of community protected marine spaces in the island province of Catanduanes, Bicol Region by focusing on effective stakeholder management and managing stakeholder inputs. Two examples from Catanduanes are presented here: (1) Kalapadan Bay Area (KBA) MPA in Baras and (2) Agojo Point Fish Sanctuary and Marine Reserve, San Andres. Analysis based on SID-SEN-SIN Model Concepts on stakeholders' identification, engagement and inputs is discussed here and includes the presentation of an on-going program/project of the Municipality of Baras - Catanduanes State University co-management or LGU-Academe Partnership contributing the effective early stakeholders' engagement in marine spaces protection of the island province.

Key words: Community Protected Marine Spaces (CPMS), Marine Protected areas (MPAs), stakeholders, fish sanctuary, Catanduanes

INTRODUCTION

Marine protected areas (MPAs) are increasingly established worldwide (Toropova et al. 2010) and the most extensively implemented fisheries management and conservation tool in the Philippines (Horigue et al. 2012) for the governance of coastal areas and oceans. Referred to as sanctuaries or marine fishery reserves-sanctuary or MFR-S (see Bradecina & Nieves 2006, Soliman et al. 2004, Crawford, Balgos & Pagdilao 2000), these protected marine spaces depend on the wide range of goals and objectives. The definition of MPAs, as provided by the International Union for Conservation of Nature (IUCN 1988), is "Any area of intertidal or sub-tidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment." MPAs are established in order to sustain fisheries and protect

biodiversity. According to (Roberts et al., 2001) marine reserves can play a key role in supporting fisheries. Most MPAs have been established and managed by communities together with local governments in a variety of community-based and co-management schemes (Horigue, Alino et al. 2012), thus the unofficial phrase *community protected marine spaces*. This approach has proven successful in gaining community acceptance and achieving local-scale fisheries and conservation objectives. The community-based scheme gave the opportunity and justified why we attempted to use said phrase here but for consistency and in accordance with IUCN terminologies, we use MPA.

MPAs in the Philippines have been established for conservation and protection of fishery resources/biodiversity, for cultural and historical purposes, for aesthetic reasons, and for research and educational concerns (Miclait & Ingles 2004). For most (about 70%), however, the major objective is to protect resources within the MPA to enhance fisheries

* E-mail: jtibarmasagca@gmail.com

production in neighboring waters (Campos & Alino 2008, Alcala & Alino 2009). Reports on the MPAs in the Philippines (Campos & Aliño 2008; Bleakley & Wells 1995) reveal that in terms of management there are only about 10 to 15% of these more than 1,300 protected areas had been managed effectively. Of recent, Horigue et al. (2012) discloses that about 20-30% of the MPAs are now effective. It was divulged by Weeks et al. (2009) that despite the success of community-based approaches to the MPAs in the country, the strategy will not be able to meet the conservation targets. While there is an urgent need to scale up MPAs to form networks in order to improve individual MPAs in Catanduanes, there are other more pressing issues that must be addressed. For instance, enforcement and implementation of MPAs legalized under the local governments of the province have to be done. Likewise, aspects on understanding the status of stakeholders' engagement in the MPAs of the province have to be dealt with prior to the forming of alliance or networks. Several reports reveal that collective action and sharing of information can improve effectiveness in managing MPAs.

Engaging stakeholders in MPA is critical for ensuring the long-term success of this conservation tool. It is said that participatory decision-making leads to smoother enforcement of MPAs legalized by local governments. Expectedly, there will be enhanced compliance with regulations for community managed MPAs and at the same time, while also promoting the livelihood and ensuring equity or fairness among the local communities. In spite of the evidences that effective stakeholder engagement in MPAs in other parts of the country, reports about stakeholder management and engagement about MPAs in Catanduanes are few and need to be probed so that MPA enforcement will not fail because of poor engagement processes. This study looked into the practices in stakeholder engagement, and how they have been applied to the management MPA in Agojo and another in the municipality of Baras which is about to be enforced. We also propose here an early engagement scheme for Kalapadan MPA which follows the protocols for marine spatial planning (Pomeroy & Devoure 2008) with the added home grown process in enhancing stakeholder engagements.

METHODOLOGY

We appraised extant literature from PhilJol, eLib, Scopus, SciDirect, Emerald, etc. and gathered official documents, conference reports, unpublished or under review papers and news clippings about the existing MPAs on engagement and decision-making processes in the island province of Catanduanes. We tried to organize the materials on relevant local legislations or ordinances related to MPA establishment, management and institutional collaboration.

Only two MPAs (implemented and to be implemented) are considered here, namely: Agojo MPA and Kalapadan MPA. These include marine reserves, sanctuaries, and no-take areas. We also conducted semi-structured qualitative key informant interviews in the said locations that centered on stakeholder management particularly on stakeholder identification (SID), stakeholder inputs (SIN) and stakeholder engagement (SEN). The methods used to achieve these goals also include stakeholder meetings, and a focus group discussion. Key informants consisted of local government officials, members of mangrove associations, women groups, non-government organizations, youth organizations and academics from the local state college.

An examination of two examples namely, the Agojo MPA and Kalapadan MPA were done in order to demonstrate how these stakeholder engagement practices were applied in different contexts. Lessons learned through this research informed a set of recommendations for the MPA stakeholders' management of the province for possible scaling up of MPA network planning in the island or the Bicol region. By taking the information in this paper, it is expected that the province could develop a strong stakeholders and public participation strategy for MPAs.

This paper suggests an Early Stakeholder Engagement for MPAs in Catanduanes under the proposed Ecofriendly Water Policy Research Study Center of the newly established Center for Climate Change Solutions for the Asia Pacific Region. Stakeholder early engagement in MPA combines policy-oriented organizing and consensus-building functions with a mixed-methods approach. From the start, the goal is to help shape sound policy based on careful observation and analysis of the research team.

RESULTS AND DISCUSSION

Agojo MPA

CREATION

In 1993, a protected area known as Agojo Point Fish Sanctuary and Marine Reserve (124.0514 Longitude, 13.6014 Latitude) or APFSMR (APFSMR or Agojo MPA) was established through Presidential Decree 704 under the Fisheries Sector Program (FSP) of the Philippines. Another MPA in Catanduanes was established in Batalay, Bato in 2001 within the Fisheries Resource Management Program (FMRP) by virtue of Republic Act No. 8550 or the Agriculture and Fisheries Modernization Act. The Agojo MPA in Agojo follows the LGU/NGO-PO concept (see Bradecina & Nieves 2006). Agojo MPA is currently being re-designed or re-developed following an institutional arrangement of LGU-Academe/State College-PO partnership as discussed by

Masagca, Asetre & Vargas (2012, under review). This paper examines the role of higher education institutions (HEIs) in the efforts to balance stakeholders participation in this concept as used by the Bicol University for some MPAs in Bicol (see reports of Dr. Bradecina and Dr Victor Soliman on and LGU-Academe-PO partnerships). MPAs in the province have been noted in the earlier works of Soliman (1999), Soliman et al. (2004), David et al. (2004), Bradecina & Nieves (2006), Masagca (2006, 2008) and on mangroves biobelting/biowalling and marine protected areas (Masagca & Masagca 2009). Agojo MPA was legalized by Municipal Ordinance No. 03 s. 1993.

LOCATION

The MPA under consideration is around Agojo Point in Catanduanes island, Philippines in the Northeastern Pacific Seaboard (Alino & Gomez 1995). The areal coverage is approximately 3 km long and 1.5 km wide peninsular region protruding into the northern waters of Lagonoy Gulf from the coastal areas of Barangay Agojo in the municipality of San Andres, Catanduanes. It is located on the southwest portion of the island of Catanduanes, a medium-sized island (total land area of 1,430 km²) off the east coast of southern Luzon in the near center of the Philippine archipelago. Fifty percent of the peninsula along the northern shoreline is a mangrove swamp. The remaining shoreline is a long stretch of white beach, while the interior is an area of farm and residential land.

There are two coastal villages or *barangay*, the basic political unit (BPU) of the Philippines located at the Agojo peninsula: the villages of Agojo and Tominawog with a combined population of about 25,000 people. Approximately, one-third of the male population is full-time fishermen and the remaining two-thirds are part-time fishermen. Majority of the fishermen in the surrounding villages rely heavily their fishing activity on the area. Because 70% of the entire population of San Andres live in the coastal villages, which rely heavily their source of food and livelihood from the harvests at the municipal swamps, estuaries and coastal waters, using fish gears (hook & line, gillnets, spear guns, fine mesh nets, deep sea spear guns with compressors), the fishing activity puts pressures on the coastal area. These practices deplete the coastal resources of the municipality which threatened to decreased fish availability. With this scenario, the population appears to be nutritionally and economically-threatened.

COASTAL RESOURCE MANAGEMENT

In order to avert the situation in the study area, resource conservation initiatives were undertaken, hence the adoption of the Coastal Resource Management (CRM) plan, and the declaration of the Agojo MPA which has a core zone of 72 hectares (ha) located at Barangay Agojo and an expanded

reserve extending to 386.625 ha of coastal areas of the adjoining Barangay Bislig, Cabcab, Bagong Sirang and Catagbacan in the island province of Catanduanes.

A document on CRM was prepared for the municipality of San Andres with the assistance of Care Philippines. This ensured the framework for implementation and management of the MPA under consideration. It is pertinent to note that the Office of the Municipal Agriculture (MAO) is the rightful office to manage and facilitate the different programs and projects this MPA in coordination with the different line agencies. The Agricultural Technician for Fisheries at the MAO in San Andres, Catanduanes was designated as the project manager. Deputized Fish Wardens (DFWs) were hired by the LGU of San Andres. In support of the establishment of the MPA, the Development of Sustainable Technology and Livelihood System was incorporated in the management and conservation program. This livelihood system has included the Mari-Culture, Aqua-Silviculture and Seaweed Processing projects for the local communities.

POLICY AND ORDINANCES

On policy approach related to governance, the municipality of San Andres approved village resolutions and ordinances in support of the MPA in Agojo Point. Examples of these policy interventions are: (1) Ordinance authorizing 60% of fine/penalty paid to LGU by violators at the sanctuary (Agojo MPA) to go to the apprehending officer (Municipal Ordinance #4 s. 1999); (2) amending and approving sets of rules and regulations covering the conduct of ethics of members of ACOMDO (Resolution # 1 s. 2001); (3) ordinance prohibiting illegal acts in the sanctuary; (4) village ordinance declaring the last Sunday of the month of December as "People's Day" and conduct of "Atag" System. This indigenous system occurs when the BPU constituents offer free labor in support to the conservation programs and projects at the sanctuary. On corrective programs, site survey and resource assessments at the Agojo MPA had been conducted by BFAR, Care Phils., ICLARM and Bicol University which were made available to the local communities through the MAO in San Andres. Likewise, the Comprehensive and Sustainable Development CRM Plan was prepared by MAO based on the framework produced by Care Phils was submitted for the action/implementation of BFAR.

KALAPADAN MPA

The Kalapadan Bay Area (KBA) in Baras, Catanduanes (*Latitude. 13.6430556°*, *Longitude. 124.3613889°*) is now facing serious problems, including stress from pollution degradation and depletion of resources, including species conflicting uses of resources; and damage and destruction of habitat. Because of these problems that Kalapadan MPA in

Baras was enacted by a Municipal ordinance in 2004 and is currently being enforced that will involve the four barangays in Baras (Buenavista, Moning, Osmena & Poblacion). The present Mayor, Chito Chi is spearheading the enforcement with the Municipal Office Planning Officer and technical assistance from CSU composed of three of the authors in this paper. Consistent to the two primary purposes in IUCN resolution 17.38: (1) to focus global attention on the urgency of the need for Marine Protected Areas as part of broader programmed to conserve the marine heritage and life-support system of the world and (2) to focus on the various actions that are necessary to ensure that marine protected areas successfully make the transition from the technical processes of planning to the reality of long-term implementation. This MPA for enforcement considers the high degree of linkage between marine environments and their connection to terrestrial activities and impacts imposes an urgent need for integration of protected area management and overall conservation strategy. With IUCN's policy (Kelleher & Kenchington 1992) Kalapadan MPA intends to: (1) maintain essential ecological processes and life support systems; (2) ensure the sustainable utilization of species and ecosystems; and (3) preserve biotic diversity.

Stakeholder Management

The concept of stakeholder management as used in the present study incorporates the stakeholder identification (SID), stakeholder inputs (SIN) and stakeholder engagement (SEN). Based on the combined interviews conducted among the main stakeholders (n = 46) and minor or external stakeholders (n = 12) there was a general consensus on the positive relation to sustainability of protected marine spaces when communities and local government units are actively engaged in building stronger relationships with their external stakeholders – their partners, collaborators, funders, donors and the local people. Further, the respondents believe that these relationships in turn can help the Agojo and Kalapadan MPAs of the province find and pursue opportunities for effective and efficient management resource efficiency.

Starting 1993 until 1998, stakeholder management aspects were analyzed based on the management plan for Agojo MPA prepared within the concept of LGU/NGO-PO arrangement. Several papers were scanned about stakeholder management in Agojo MPA (see earlier papers of Bradecina & Nieves 2006, Soliman et al. 2004; Masagca 2002 and 2003;; and unpublished paper of Vargas & Asetre, 2011 presented in IASC India). Other extant literature published in *Ocean & Coastal Management* or *Marine Affairs* include some aspects of stakeholder management of this MPA which is currently under intensive reviewing.

Several themes were used in the analysis as to the community engagements from the process of establishing and implementing the Agojo MPA from community entry with the appraisal, planning with financing arrangements, formalization with the ordinance and implementation with the adjustments. Responses of the main stakeholders indicate that throughout these steps followed in Agojo, stakeholder management was ensured to the fullest extent as to SID, SIN and SEN. With the gradual changes as to the increasing responsibility and commitment of the stakeholders, the field workers of the LGU and NGO provided the necessary assistance so that engagements do not wane. At the same time that the LGU-NGO are engaged in community building capacities, the external or minor stakeholders started to assist in the management of the Agojo MPA by providing varied inputs such as livelihoods, microfinancing and other community projects. However, the respondents expressed during the interviews and discussions that a greater number of external institutions as minor stakeholders performed like the “ningas kugon” concept that at the earlier stage, very high commitment was observed. Later, their engagements slowly diminished within the 1 to 2-year period which had some lasting effects on the main stakeholders. This lowering of intensity in the engagement of intervening institutions like academic institutions can be seen from the lack of a functional contract or MOA for at least 2 years to ensure continued community engagement with within the context of accountability if non-compliance occurs. In the case of academic institutions, the semestral and school year phasing of activities could be one valid reason why these institutions were noted by the stakeholders to have reduced commitment. After these institutions have already gathered data for research works or carried out extension sessions, the stakeholders who were interviewed expressed concern that they tend to disappear from the view thus, the presence of the present researchers in the said MPA had some negative meanings to some.

The main stakeholders claim that intervening institutions like SUCs and the different governmental agencies like DOST, BFAR, etc. appear to have “used” only the MPAs in order to serve their institutional interests and do not look into the general welfare or longer commitment to the whole community. Truthfulness about this finding and the need to validate by using triangulation during the study was vigorously pursued with repetitive interrogation. After a series of explanation like the very limited role of academic institutions as a technical support and also biased to the monitoring and evaluation phase of the project, the stakeholder respondents finally agreed that higher academic institutions (SUCs) have limited resources (both time and funding) so that the longer gestation period from 3 to 5 years

in MPAs as to the achievement of the objectives will not guarantee for the full commitment owing to the other functions of the faculty involved in the MPAs. There could be some truth about the other intervening institutions but the researchers consider these observations to be anecdotal and cannot be considered towards plausible conclusions or generalizations.

Stakeholder Identification (SID)

Available literature reveals that well-designed MPAs have been shown globally to increase the abundance and diversity of organisms inside as well as outside their boundaries as noted by Stevenson & Gold, M. 2012.) and possibly Agojo, San Andres, Cataduanes (see Vargas & Asetre 2011). Anecdotal reports and one-on-one interrogation of the newly re-organized PO in Agojo known as ACOMDO) reveal the increase in population density of “sandig” and “kataway” (Siganidae) and other seagrass dwelling fishes. Increased population density of the gastropods, *Cypraea* and *Haliotis* was also known as well as other bivalves of the genus *Tridacna* and *Pinctada*. Questions whether these bio-ecological changes will have relations to stakeholder management need to be addressed but will be difficult to probe.

One most important component in stakeholder management is the identification of the major and minor or intervening stakeholders in the MPAs under enforcement. It is assumed that during the early years from 1993 to 1999 of Agojo MPA, the stakeholders were identified based on the criteria set by the LGU and NGO which spearheaded and prepared the management plan. The major stakeholders include the members of the PO or ACOMDO (now AMPAI or Agojo Mangrove Planters Association) with the LGU and other groups in the barangay. The minor stakeholders include women groups, barangay officials, SK and local people from the neighboring barangays of Tominawog, Comagaycay and Catagbakan. The other minor stakeholders include the staff of DENR, DA, BFAR, schools around the area, small business operators, excursionists, researchers from the academics, divers, fishers from other barangay, beach operators from the municipality. Stakeholder multiple groups include government agencies, stakeholders, and other interested parties (Briot et al. 2011, Syms & Carr 2001, Dahl-Tacconi 2005).

In Kalapadan MPA, the SID made by the technical working group composed of CSC faculty and planning staff of the Office of the Municipal mayor include the councils of four barangays, FARMC, the fishermen group, farmers organizations, women, mangrove organizations, bay fishers and anglers. The minor stakeholders are the tourists who go to Puraran beach, surfers, anglers, boat operators, businessman

around Kalapadan Bay area, boat operators, bus and jeepney operators, researchers, environmentalists and faculty/students of CSU and other schools of the province.

Stakeholders identification of issues, groups and strategies for the Agojo MPA was done through the facilitative discussions or forums or during informal talks and LGU council meetings. Identifying specific roles of the main and minor stakeholders was known to be important for both the Agojo and Kalapadan MPAs.

Stakeholder Inputs (SIN)

The works of Borad and Sanchirico (2008), Elliott et al. (2001) and Pollnac et al., (2001) underscored the importance of stakeholder involvement through their inputs (SIN) in MPA management. There is now an increasing body of literature on stakeholders' opinions in relation to MPA performance as reported by Himes (2007), Webb et al. (2004), Suman et al. (1999). Stakeholder inputs and the involvement in the development of MPA performance indicators are also increasing such as that of Dahl-Tacconi (2005), Pajaro et al. (2010), Vasconcelos (2011), Dalton, Forrester & Pollnac (2012), Heck, Dearden & McDonald (2012). More recent papers on the stakeholder inputs come from the works of Stevenson, Sikich & Gold (2012), Smith (2012), Allegretti, Vaske & Cottrell (2012) and Jentoft et al. (2012).

During the interviews, the respondents concurred to the idea that inputs of stakeholders can provide insights to the local marine space issues in the island. This is parallel to the study of Charles & Wilson (2008) and seems to be true to the Kalapadan MPA. Engagement signifies social acceptability and support for a future MPA (Thomassin et al., 2010). At the time that Agojo MPA was established in the 1993, it was highly likely that that policy decisions are based upon accurate understanding of the local social and environmental condition as suggested by Pomeroy et al., (2007). However, inputs are based on what will the PO get from the arrangements of contributing organizations.

Stakeholder Engagement (SEN)

Stakeholder engagement or participation in the early stages of the planning process is particularly useful in order to understand concerns towards the establishment of a MPA (Salz and Loomis 2004). This concept of SIN refers to how reinforcement can the value organizations like the ACOMDO (now AMPAI) in Agojo for protected marine spaces gain from working with their stakeholders, and ensuring that sustainability advantage of the people organization managing the protected area. Heuristically, the POs in Agojo and at

present AMPAI experience numerous setbacks which can be due to (1) inappropriateness of the management plan, (2) political intervention which is an inevitable circumstance that will have immediate and long-term effects, (3) organizational capability limitations, and (4) inadequate community assets to implement the management plan for Agojo MPA. Based on the hermeneutic cyclic analysis and iteration, it was more likely (based on anecdotal materials) that Agojo had some contributions to the limitations of “paper parks” by not focusing on ways of *conducting transparent processes*. Flexibility in the implementation of the plan appears to be one of the ways by which little successes have been achieved in the management of Agojo MPA. The local focal persons or community organizers appeared to have not exercised independent facilitation as asserted within the context of too much ‘political intervention’ with the presence of ‘riders’, ‘exploiters’ and undefined practice political patronage.

Based on the current paper of Masagca (2018), under review the practice in stakeholder engagement cannot achieve certain success if the planners and implementers of Agojo’s and Kalapadan’s management plan will fail to *incorporate the socioeconomic data*. Added to this is the *utilization of local knowledge* which cannot just be determined by just having concisely and succinctly or one- to two-shots visit of the organizers. Living with the local people at a longer period can enhance engagement. For instance, precise data on the actual family or household incomes, determination of actual benefits of governmental programs such as 4 Ps and data on the benefits of the livelihoods provided by different agencies will form part of a highly acceptable socio-economic data.

In each of the 4 barangays in Baras, the community coordinators is being planned to coordinate the participation of a wide range of stakeholders including surfer or divers who go Puraran beach resort, fishermen from other places, conservationists/environmentalists of Catanduanes, local officials of the other barangays in Baras, business owners in the Puraran and Kalapadan Bay Area (KBA) and coastal residents, who have recommended for the establishment of Kalapadan Marine Sanctuary.

Early Stakeholder Engagement for MPAs in Catanduanes

Experience in the implementation of ecosystem-based management (EBM) has shown to be most successful when a great diversity of stakeholders is engaged early in a process, as opposed to a more top-down decision making process (Stevenson, Sikich & Gold 2012). In the case of the present enforcement of Kalapadan MPA, earlier stage followed the top-down decision making process and later on moved into the bottom-up process in decisions by fostering meaningful participation, engaging early and establishing clear objectives.

The need for an early engagement is deemed important when this new MPA is about to enforced.

From 1993 to 1996, then 1998-1999 and from 2009-2012, and 2015-2017 the author (JTM) and faculty researchers of CSU have gained visibility in the Agojo MPA. In fact, several published were prepared (Bradecina & Nieves 2006, Soliman et al. 2004) in regard to MPAs in Catanduanes which include aspects of engagements that involve the intervening academic institutions like SUCs.

With the invitation of the Baras Municipal Office for Technical Assistance dated May 15, 2012, a committee was created by the CSC President to work on the CRM project of the municipality that includes the enforcement of Kalapadan MPA . As a response to this request of the municipal LGU, a technical committee headed by JTM started to design ways on how to address the myriad of issued to be addressed in Kalapadan Bay Area CRM project.

CSU’s commitment for technical assistance particularly on the enforcement of an MPA in the KBA yielded a small component for inclusion in the 2012-2016 FYSDP on the creation of a multidisciplinary institute for water, renewable energy, environment and climate within the Ecoville Vision 2020 which will work for a Water Policy *Lab for Rivers and Marine Spaces*. This proposed research lab integrates technical assistance projects and fisheries RDE particularly on the Agojo and Kalapadan MPAs. As management objectives for the Kalapadan MPA will depend on the specific ecological, cultural or socioeconomic problems of Baras, Catanduanes that this MPA is meant to improve, the purpose, type, size and shape and the concept is currently being finalized by the technical team. This is so since MPAs cannot be generalized (Agardy et al. 2003) and the case of Agojo MPA is different from Kalapadan MPA in many respects but can be integrated in a protocol for the early engagement of stakeholders. The case of Agojo MPA which has a PO just re-organized (now with a new name AMPAI) and Kalapadan MPA which will have a management plan to be formulated as well as stakeholders identification and engagements, the necessity to design an early engagement protocol for both MPAs clearly suggest the urgency. In the design of a new MPA such as the enforcement of Kalapadan MPA, the local context according to Heck, Dearden & McDonald (2012), Wells & Mangubhai (2005) and Alder et al. (2002) must be clearly understood and taken into consideration in the development of the goals and objectives . Likewise, clear statements are to be developed, at the early planning stage, that will indicate what this new MPA is supposed to achieve and how can it be effective with the early stakeholder engagement. While several cases can be found in different islands of the Philippine archipelago, this paper will subscribe early stakeholder engagement patterns and models from various sources. With the extensive literature

reviews, several models can serve as guides as those propounded by various MPA specialists whom some of the authors of this paper have personal or direct contacts. In this way, establishing networks can be done with ease and include research components to increase productivity in refereed publications.

While Kalapadan MPA is about to be enforced, we attempted to consider geographical framing as well as the geophyco-ecological characteristics of the areas covered. These areas are vulnerable to certain threats and natural phenomena in the planning and management of MPAs. During the process we are currently suggesting to the municipality of Baras an approach that includes the integration and encouragement of stakeholders engagement which have very strong legal backings in Philippine statutes and policies related to CRM. We propose here the approach which is mainly composed of the marine spatial planning as suggested by Pomeroy and Douvere (2008). The stages of the planning process and the ways in which stakeholders should be included at each stage are as follows: I- *The MPA Management Planning Phase* (Major stakeholders will contribute to the setting of priorities, objectives, and the purpose of MPA management plan; and identify stakeholders who can assist to determine, organize or group, and rank management problems, needs, and opportunities in order of priority; II- *The MPA Management Plan Evaluation Phase* (Stakeholders of Agojo and Kalapadan MPAs will be engaged in the evaluation and choice of plan options; III- *The MPA Management Plan Implementation Phase* (Stakeholders of Agojo and Kalapadan MPA will be utilized in the community-based approach to enforcement in the areas covered); IV-*The MPA Management Plan Post Implementation Phase* (Major and minor stakeholders will be consulted about the overall effectiveness or performance in achieving goals and objectives of the plan).

The strategies formulated for the four-stage process will include SID, SIN and SEN. Table 1 shows the programs/ activities and strategies for both Agojo and Kalapadan MPA.

The formulation of the protocol and the strategies as discussed previously and the engagements are expected to enhance the level of awareness and role of MPA in conservation of the island's sustainability as well as raising the community response level. Several references were used here such as (Pulina & Meleddu 2012; Smith 2012; Treffny & Beilin 2011; Yang et al. 2011; and Salter , Robinson & Wiek 2010).

CONCLUSION

The knowledge gained during the course of this study on stakeholder management with stakeholder identification, inputs and engagements project provided additional insights into stakeholder views toward the efficient and effective achievement of the goals and objectives of MPAs in Catanduanes. Equally important are the stakeholders' views that fostered new relationships and perspectives among all the stakeholder participants, including the LGUs, peoples' organizations and the educational institutions engaged in the management of MPAs in Catanduanes. With some few dissenting views, some stakeholders displayed indifferences as to how intervening institutions are perceived to have little capacity to improve the management of MPAs by maximizing stakeholder engagements. The views are on the lack of properly designed management or zoning plans that will incorporate ways to generate funds for the MPAs and not rely on dole-outs as the historically accepted as anti-developmental. Some stakeholders have not yet fully engaged themselves in the management of MPAs and have not realized the emerging practice of converting their organization as the platform to generate income for the general operation of the MPA. They were understandably concerned and even worried about the coming in and out of external people or institutions as the minor stakeholders who suddenly visit the protected marine space for no reason at all but are willing tom assist the management of the protected areas for sustainability. Political

Table 1. Stakeholder management, proposed activities/strategies for 2 MPAs in Catanduanes.

Stakeholder Management Component	Activities/Strategies	Locations and Target Actors
Stakeholders identification (SID)	interviews with potential stakeholders; meetings with the identified major and minor for stakeholders	Kalapadan Bay Area; Office of the Municipal Mayor of Baras; Catanduanes State University
Stakeholder Inputs (SIN)	public consultation with the stakeholders; creation of a barangay-based consultative committee or site coordinators through the FARMC; interviews and clustered workshops for the POs and groups; capacity building; general workshop for Kalapadan MPA protected marine spaces	Project Management Committee of Kalapadan MPA; The MLGU Baras-CSU Technical Committee; and the Barangay Captain of Tominawog and Barangay Council of Agojo; Municipal LGU; Catanduanes State University; MAO; DENR, etc.
Stakeholder Engagement (SEN)	In situ meetings, leadership trainings, study visit in other MPAs	All Major and Minor Stakeholders of Agojo and Kalapadan MPAs

intervention and conflicts within the project management team of the LGU and the inability to reach out as to the desired needs of the local people taking care of the marine spaces deserve further look as to maximizing engagements. It should be clear to the stakeholders that effective engagement will have relations to the overall time, cost, complexity, and uncertainty involved in pursuing their activities for the MPAs. As such, the need to propose early engagement schemes for the enforcement of an MPA in the province with the urgent need for an intervening and co-managing higher education institution or SUC to commit at least 2- or 3- year time period of engagement with the community which will ensure success and sustainability of MPAs in the island province. With the establishment of the natural resource or environmental unit in SUCs such as the proposed Water Policy Lab for Rivers and Marine Spaces in the state university can take care the technical needs of MPAs in the island province. This is a positive move towards sustained stakeholder management approach by carrying out background researches, facilitated dialogues and extension services to LGUs which will be enforcing MPAs in their localities.

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